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09/752,817	01/03/2001	Shunpei Yamazaki	12732-003001/US4564	9971
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FISH & RICHARDSON P.C.			KUMAR, SRILAKSHMI K	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/752,817	<b>Applicant(s)</b> YAMAZAKI ET AL.	
	<b>Examiner</b> Srilakshmi K. Kumar	<b>Art Unit</b> 2629	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 5-12, 18-22 and 29-63 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-12, 18-22, 29-53 and 59-63 is/are rejected.
- 7) ☐ Claim(s) 54-58 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

The following office action is in response to the Request for Continued Examination filed on October 31, 2007. Claims 5-12, 18-22, 29-63 are pending. Claim 49 has been amended. Claims 54-63 are newly added.

#### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
3. Claims 5, 7-10, 12, 18-20, 22-26, 28-31, 33-37, 39-53, and 59-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (US 6,265,833) in view of Ikeda et al (US 5,714,968) and further in view of Yamaguchi et al (US 6,853,083).

As to independent claim 5, Kim et al teach a display system comprising; a plurality of pixels; each of said plurality of pixels comprising at least an EL element (col. 1, lines 10-16, col. 9, lines 57-63); a sensor for obtaining an information signal of an environment (Fig. 1, item 1), a

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CPU for converting said information signal of the environment supplied from said sensor into a correction signal (Fig. 1, item 3), and a voltage changer for changing a corrected potential applied to the EL element based on said correction signal (Fig. 1, item 4); an EL driving power source connected to said voltage changer (Fig. 3). Kim et al do not disclose the details of the EL display device. Kim et al do not disclose wherein the EL element has a first electrode and a second electrode. Kim et al do not disclose wherein said voltage changer is electrically connected to the second electrode of the EL element via a switch nor wherein the first electrode of the EL element is electrically connected to a power supply line. Ikeda teaches wherein the EL element comprises a first electrode and a second electrode in Fig. 10, item 21. Ikeda teaches the voltage changer (34) is electrically connected to the second electrode of the EL element via a switch (22) (see figure 10). In Fig. 5, item 1, and col. 6, line 64-col. 7, line 12, Ikeda teaches wherein the first electrode of the EL element is electrically connected to a power supply line (25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the active EL matrix display details as illustrated by Ikeda when implementing the system items 4 and 5 of Kim et al because Kim et al lacks these specific manufacturing details directed towards the actual EL circuit within the display therefore one of ordinary skill would have been motivated to simply use Ikeda's active matrix to the display device of Kim because active matrix display device of Ikeda is capable of prolonging light emission of the light emitting elements, thereby protecting the user from having to view a display where the light flickers (col. 2, lines 7-13 of Ikeda). While Kim and Ikeda teach wherein the first electrode of the EL element is electrically connected to a power supply line, they fail to teach where the connection is via the transistor of the pixel including the EL element. Yamaguchi et al teach in Fig. 4, where the EL

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element (406) is electrically connected to a power supply line (Vdd) via the transistor (405) of the pixel including the EL element. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of the connection via the transistor of the pixel including the EL element as taught by Yamaguchi into the display system of Kim as modified by Ikeda as the connection enables controlling of the current applied to the EL elements (Yamaguchi col. 2, lines 30-35) and provides a TFT to be used in the display to prevent short circuit and disconnection in the EL display device in order to promote high reliability of the display device (Yamaguchi et al, col. 1, lines 54-61).

As to claim 7, the combination of Kim et al and Ikeda teaches a display system according to claim 5, further comprising, Kim et al disclose wherein said plurality of pixels, said sensor, said CPU and said voltage changer are formed on a same substrate (Fig. 1 illustrates all the claimed pads in one illustration it is obvious that they are capable of sharing a common substrate while enclosed above said common surface of an enclosure).

As to claim 8, the combination of Kim et al. and Ikeda teach a display system according to claim 5, further comprising, Kim et al disclose wherein said EL element comprises an organic material or an inorganic material (Fig. 1, item 5, col. 1, lines 10-15).

As to claims 9, 12, limitations of claims 5 and 10, Kim et al disclose wherein said display system is incorporated in one selected from the group consisting of a video camera, a digital camera, a head mount display, a car navigation system, a portable telephone, an image reproduction apparatus, a car audio equipment, and a personal computer (col. 10, lines 21-34 and further these specific uses of the display are viewed as merely being recitations directed towards an OBVIOUS INTENDED USE of the display).

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As to claim 18, limitations of claims, 5 and 12, Kim et al do not disclose wherein an EL element comprising at least an EL layer between an anode and a cathode, one of said anode and said cathode being electrically connected to said active layer. Ikeda discloses wherein an EL element comprising at least an EL layer between an anode and a cathode, one of said anode and said cathode being electrically connected to said active layer in Figs. 12 and 16, col. 10, lines 33- col. 11, line 20. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of an EL element comprising at least an EL layer between an anode and a cathode, one of said anode and said cathode being electrically connected to said active layer as taught by Ikeda into the display system of Kim et al because active matrix display device of Ikeda is capable of prolonging light emission of the light emitting elements, thereby protecting the user from having to view a display where the light flickers (col. 2, lines 7- 13 of Ikeda).

As to claim 19, 40 limitations of claim 13, and further comprising, Kim et al disclose wherein said sensor comprises a CCD or a photo diode (Fig. 1, item 1, an optical sensor responsive to light).

As to claims 20, 22, 29-31, 33, 35, 37 and 39, the combination of Kim et al and Ikeda were shown above to read on these limitations.

As to claims 25 and 36, Kim et al disclose an A/D converter interposed between said sensor and said CPU, and a D/A converter interposed between said CPU and said voltage changer (Fig. 1, the CPU controller uses A/D for it's input and D/A for its output while interacting with analog devices.)

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As to claims 41-44, Kim teaches wherein the EL element comprises an organic material or an inorganic material (col. 1, lines 11-16).

As to claims 45-48, Yamaguchi et al teaches wherein the transistor is a current controlling thin film transistor (col. 2, lines 30-35).

As to claims 49-53, Ikeda teaches in Fig. 5 a switching thin film transistor (2) electrically connected to a gate electrode of the current control thin film transistor (3).

As to claims 59-63, Kim does not teach wherein the thin film transistor comprises monocrystalline semiconductor film. Ikeda teaches in col. 12, lines 42-45 wherein the tfts comprise monocrystalline semiconductor film. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include where the TFT comprise monocrystalline semiconductor film as taught by Ikeda into Kim et al as the monocrystalline semiconductor film enables high speed performance of the TFT.

4. Claims 6, 11, 21, 32 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al in view of Ikeda and Yamaguchi as applied to claims 5, 10, 13, 18, 23, 29, and 34 above, and further in view of Poulton (US 5,702,323).

As to claims 6, 11, 21, 32 and 38, Kim et al and Ikeda do not teach wherein said information signal comprises a user's living body information. Poulton teaches wherein said information signal comprises a user's living body information (abstract, Fig. 5, item 230, col. 2, lines 48-57, col. 4, lines 3-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the optical sensor item 1 as illustrated by Kim to also keep track of body pads position as done by Poulton when implementing the system item 1 of Kim et al because this limitation is merely directed towards an OBVIOUS INTENDED USE, of

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the combination of Kim et al and Ikeda et al as illustrated by Poulton, and further, Poulton gives motivation in col. 1, lines 5-10 for modifying the use of the Kim item 1 which Poulton provided a further illustration of an additional "use" for the information given by an optical sensor.

***Allowable Subject Matter***

5. Claims 54-58 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: With respect to claims 54-58, the prior art of record does not teach where the switch which is connected between the voltage changer and the second electrode of the element, is provided in an external portion.

***Response to Arguments***

7. Applicant's arguments filed October 31, 2007 have been fully considered but they are not persuasive.

With respect to the 35 USC 112, second paragraph, rejection of claim 49, this has been withdrawn as the claim has been amended to more clearly identify which transistor is being claimed.

With respect to applicant's arguments of where the prior art fails to teach a voltage changer electrically connected to the second electrode of the el element via a switch, examiner, respectfully, disagrees. Kim teaches a voltage changer for changing a corrected potential applied to the EL element based on said correction signal (Fig. 1, item 4). Ikeda et al teach the limitations of wherein the EL element comprises a first electrode and a second electrode in Fig.



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10, item 21. Ikeda teaches the voltage changer (34) is electrically connected to the second electrode of the EL element via a switch (22) (see figure 10). In Fig. 5, item 1, and col. 6, line 64-col. 7, line 12, Ikeda teaches wherein the first electrode of the EL element is electrically connected to a power supply line (25). The combination of Kim and Ikeda teach the features of the voltage changer and the pixel circuit. Further, it appears where the applicant's arguments are directed to the references separately, thus, in response, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues where in Ikeda, item 22 is not shown to be a switch. Examiner, respectfully disagrees. Ikeda teaches where the transistor 22 controls the EL element as a switch in col. 9, lines 22-25.

Applicant argues where the prior art does not teach that the first electrode of the el element is connected to a power supply line via the transistor of the pixel including the EL element. Examiner, respectfully, disagrees. Yamaguchi et al teach in Fig. 4, where the EL element (406) is electrically connected to a power supply line (Vdd) via the transistor (405) of the pixel including the EL element. Applicant further argues where one of ordinary skill in the art would not combine Yamaguchi to that if Kim in view of Ikeda. Examiner, respectfully, disagrees. Yamaguchi teaches that by this connection, current applied to the EL element can be controlled for proper display (Yamaguchi in col. 2, lines 30-35).

Therefore, the combination of Kim, Ikeda and Yamaguchi teach the limitations set forth in the application.

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*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srilakshmi K. Kumar whose telephone number is 571 272 7769. The examiner can normally be reached on 9:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sue Lefkowitz can be reached on 571 272 3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Srilakshmi K Kumar  
Examiner  
Art Unit 2629

SKK  
December 29, 2007